

Tuberculosis

What is tuberculosis?

Tuberculosis, or TB, is a disease caused by a bacteria called *Mycobacterium tuberculosis*. The bacteria can attack any part of the body, but they usually attack the lungs. TB was once the leading cause of death in the United States.

What are the symptoms of TB?

Symptoms of tuberculosis depend on where in the body the TB bacteria are growing. TB bacteria usually grown in the lungs. TB in the lungs may cause:

- a bad cough that lasts longer than 2 weeks
- pain in the chest
- coughing up blood or sputum (phlegm from deep inside the lungs)
- weakness or fatigue
- weight loss
- no appetite
- chills
- fever
- sweating at night

How does someone get TB?

Tuberculosis is spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected and the bacteria can settle in the lungs and begin to grow. From there they can move through the blood to other parts of the body, such as the kidney, spine, and brain. TB in the lungs or throat can be infectious, meaning that the bacteria can be spread to other people. TB in other parts of the body is usually not infectious.

What is latent TB infection?

In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them

from growing. The bacteria become inactive, but they remain alive in the body and can become active later. This is called latent TB infection. People with latent TB infection:

- have no symptoms
- don't feel sick
- can't spread TB to others
- usually have a positive skin test reaction
- can develop TB disease later in life if they do not receive treatment for latent TB infection

Is there a test for TB?

A TB skin test is the only way to find out if you have latent TB infection. You can get a skin test at your doctor's office. A health care worker will inject a small amount of testing fluid (called tuberculin) just under the skin of the lower part of your arm. After 2 or 3 days, the health care worker will measure your reaction to the test. You should get tested for TB if:

- you have spent time with a person with known or suspected TB disease
- you have HIV infection or another condition that puts you at high risk for TB
- you think you might have TB disease
- you are from a country where TB disease is very common (most countries in Latin America and the Caribbean, Africa, Asia, Eastern Europe, and Russia)
- you inject drugs
- you live somewhere in the U.S. where TB disease is more common (homeless shelters, migrant farm camps, prisons and jails, and some nursing homes)

Is there a vaccine for TB?

BCG is a vaccine for TB. This vaccine is not widely used in the United States, but it is often given to infants and small

children in other countries where TB is common. BCG does not always protect people from TB. If you were vaccinated with BCG, you may have a positive reaction to a TB skin test. This reaction may be due to the BCG vaccine itself or to latent TB infection.

Is TB a problem in the United States?

In the 1940s, scientists discovered the first of several drugs now used to treat TB. As a result, TB slowly began to disappear in the U.S. But TB has come back. Between 1985 and 1992, the number of TB cases increased. The country became complacent about TB and funding for TB programs was decreased. There were over 15,000 cases of TB reported in the U.S. in 2002 and New Hampshire had 19 cases.

Are there certain risk factors for TB?

Anyone can be infected with tuberculosis. The bacteria then may become active if the immune system cannot stop them from growing. The active bacteria begin to multiply in the body and cause TB disease. Some people develop TB disease soon after becoming infected, before their immune system can fight the TB bacteria. Other people may get sick later, when their immune system becomes weak for some reason. Babies and young children often have weak immune systems. Other people can have weak immune systems, too, especially people with any of these conditions:

- HIV, the virus that causes AIDS
- substance abuse
- silicosis
- cancer of the head and neck
- leukemia or Hodgkin's disease
- severe kidney disease
- low body weight/malnutrition
- certain medical treatments (such as corticosteroid treatment or organ transplants)
- diabetes

Is there a cure for TB?

TB disease can almost always be cured with medicine. But the medicine must be taken exactly as the doctor or nurse prescribes and the entire course of treatment must be completed. Someone with TB will be prescribed several different drugs because there are many bacteria to be killed and several different drugs together will do a better job of killing all of the bacteria and preventing them from becoming resistant to the drugs.

Why hasn't tuberculosis been eliminated if there is a cure and a vaccine?

One of the reasons is that the funding was never sufficient in the U.S. or worldwide to eliminate the disease altogether like smallpox. The other main reason is that when TB patients do not take their medicine as prescribed, the TB bacteria may become resistant to a certain drug or drugs. This means that the drugs can no longer kill the bacteria. TB resistant to more than one drug is called multidrug-resistant TB or MDR TB. This is a **very serious** problem. People with MDR TB disease must be treated with special drugs. These drugs are not as good as the usual drug for TB and they may cause more side effects. Also, some people with MDR TB disease must see a TB expert who can closely observe their treatment to make sure it is working. People who have spent time with someone sick with MDR TB disease can become infected with TB bacteria that are resistant to several drugs. If they have a positive skin test reaction, they may be given preventive therapy. This is very important for people who are at high risk of developing MDR TB disease, such as children and HIV-infected people.

What do I do if I have some of the symptoms of TB or think I might have been exposed to TB?

Contact your health care provider as soon as possible.

For specific concerns about tuberculosis, call the New Hampshire Department of Health and Human Services, Bureau of Communicable Disease Control and Surveillance at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the New Hampshire Department of Health and Human Services website at www.dhhs.state.nh.us.